

REPORT OF THE COUNCIL TO THE SEVENTY-SECOND ANNUAL
GENERAL MEETING OF THE SOCIETY.

The following table shows the progress and present state of
the Society :—

	Compounders	Annual Subscribers	Mathematical Society	Total Fellows	Associates	Patron	Grand Total
December 31, 1890	239	374	3	616	48	I	665
Since elected	+ 11	+ 20	...	...	...	...	...
Deceased	— 6	— 5	...	...	— I	...	...
Resigned	— I	— 9	...	...	...	...	...
Expelled ... ..	...	— 9	...	...	...	...	...
Removals	+ 4	— 4	...	...	...	...	...
December 31, 1891	247	367	3	617	47	I	665

Dr. Common's Account as Treasurer of the Royal

RECEIPTS.

Balances, January 1, 1891:—						£	s.	d.	£	s.	d.		
At Bankers', as per Pass Book						342	10	1			
Cheque not credited till 1891						2	2	0			
In hand of Assistant Secretary on account of Turnor and Horrox Fund						6	0	9			
In hand of Assistant Secretary on Petty Cash Account						3	17	1			
											354	9	11
Dividends on £13,200 Consols, 2¾ per cent.						...		353	18	8			
,, on £212 9 2 New 2½-per-cent. Stock.						...		2	11	10			
,, on £1,250 Metropolitan Stock, 3 per cent.								36	11	4			
Interest on £200 on deposit at Bankers'						1	17	5			
											394	19	3
Received on account of Subscriptions:—													
Arrears						184	7	0			
254 Annual Contributions for 1891						533	8	0			
5 „ „ 1892						10	10	0			
34 Admission Fees						71	8	0			
21 First Contributions						33	12	0			
											833	5	0
17 Composition Fees									357	0	0
Sales of Publications:—													
At Williams & Norgate's, 1890						25	3	0			
At Society's Rooms, 1891						45	14	6			
											70	17	6

Audited and found correct, 1892 Jan. 6.

ROBT. J. LECKY,
W. H. MAW.

£2,010 11 8

Astronomical Society, from January 1 to December 31, 1891.

EXPENDITURE.

	£	s.	d.	£	s.	d.
Assistant Secretary : Salary	250	0	0			
" " for assistance in editing Society's Publications ...	50	0	0			
				300	0	0
Income Tax and House Duty	10	10	0			
Fire Insurance	7	16	6			
				18	6	6
Printing, &c.	557	0	0			
Engraving and Lithography	6	17	6			
				563	17	6
Computation of Ephemerides				50	0	0
Turnor and Horrox Fund : Purchases for Library	8	1	6			
Encyclopædia Britannica	27	15	0			
Binding Books in Library	9	17	0			
				45	13	6
Alterations, Decorating, and Repairs	26	5	6			
Sundry Fittings and Repairs	12	12	11			
				38	18	5
Lantern, &c., for Evening Meetings	34	2	0			
Ballot-boxes	7	15	6			
Re-covering and repairing Globes	5	16	0			
Lantern-slides	2	4	0			
				49	17	6
House Expenses	53	12	8			
Wages	44	8	0			
Postage	70	18	3			
Carriage of Parcels	1	7	2			
Stationery and Office Expenses	9	1	2			
Expenses of Meetings	20	0	0			
Coals and Gas	53	17	11			
Electric Lighting Expenses	1	13	4			
Rental of Wire for Time Signal, &c.	6	11	6			
Care of Fire-extinguishing Apparatus	3	8	9			
Sundries	5	4	0			
				270	2	9
Mrs. Jackson Gwilt's Annuity	8	19	0			
Lee and Janson Fund Grants	12	10	0			
				21	9	0
Purchase of £212 9 2 New 2½-per-cent. Stock at 94, including Commission				200	0	0
Bankers' Deductions on Cheques				0	1	11
Balances, December 31, 1891 :—						
At Bankers', on current account	243	17	6			
" " on deposit	200	0	0			
In hand of Assistant Secretary on account of Turnor and Horrox Fund	7	19	3			
In hand of Assistant Secretary on Petty Cash Account	7	10				
				452	4	7
				<u>£2,010</u>	<u>11</u>	<u>8</u>

Assets and Present Property of the Society, 1892 January 1.

Balances, December 31, 1891:—						£	s.	d.	£	s.	d.			
At Bankers', on current account						243	17	6						
„ „ on deposit						200	0	0						
In hand of Assistant Secretary on account of														
Turnor and Horrox Fund						7	19	3						
In hand of Assistant Secretary on Petty Cash														
Account						0	7	10						
						<hr/>			452	4	7			
Due on account of Subscriptions:—														
1 Contribution of 4 years' standing						8	8	0						
7 Contributions of 3 „						44	2	0						
36 „ 2 „						151	4	0						
65 „ 1 „						136	16	0						
						<hr/>								
						340	10	0						
Less 5 Contributions paid in advance						10	10	0						
						<hr/>			330	0	0			
Due from Messrs. Williams & Norgate for sales of Publications during 1891												25	12	2
Due from Messrs. Wesley & Son, from sale of old non-astronomical books												12	18	0
£13,200 2¼-per-cent. Consols, including the Lee and Janson Fund, the Turnor Fund, the Horrox Memorial Fund, and Mrs. Jackson Gwilt's gift.														
£212 9 2 New 2½-per-cent. Consols.														
£1,250 Metropolitan 3-per-cent. Stock.														
Astronomical and other Manuscripts, Books, Prints, and Instruments; Furniture.														
Unsold Publications of the Society.														
5 Gold Medals.														

Trust Funds.

The Turnor Fund: A sum of 450*l.* $2\frac{3}{4}$ -per-cent. Consols, the interest to be used in the purchase of books for the Library.

The Horroæ Memorial Fund: A sum of 100*l.* $2\frac{3}{4}$ -per-cent. Consols, the interest to be used in the purchase of books for the Library.

The Lee and Janson Fund: A sum of 323*l.* 16*s.* 3*d.* $2\frac{3}{4}$ -per-cent. Consols, the interest to be given by the Council to the widow or orphan of any deceased Fellow or Associate of the Society who may stand in need of it.

Mrs. Jackson Gwilt's Gift: 300*l.* $2\frac{3}{4}$ -per-cent. Consols, subject to an annuity to the donor during her life of 8*l.* 19*s.* per annum.

Report of the Auditors.

We have examined the Treasurer's accounts for the year 1891, and have found and certified the same to be correct. The cash in hand on Dec. 31, 1891, including the balance at the bankers' on current account, and a sum of 200*l.* on deposit, amounted to 452*l.* 4*s.* 7*d.*

The funded property of the Society has been increased by the purchase of 212*l.* 9*s.* 2*d.* New $2\frac{1}{2}$ -per-cent. stock.

The books, instruments, and other effects have been examined, and they appear to be in a satisfactory condition.

We have laid on the table a list of the names of those Fellows who are in arrear for sums due at the last Annual General Meeting, with the amount due against each Fellow's name.

ROBT. J. LECKY,
W. H. MAW.

Stock in hand of volumes of the *Memoirs* :—

Vol.	At Society's Rooms	At Williams & Norgate's	Vol.	At Society's Rooms	At Williams & Norgate's
I. Part 1	7	...	XXX.	157	1
I. Part 2	42	...	XXXI.	140	...
II. Part 1	54	...	XXXII.	151	1
II. Part 2	20	...	XXXIII.	161	...
III. Part 1	65	1	XXXIV.	162	4
III. Part 2	84	1	XXXV.	107	5
IV. Part 1	77	3	XXXVI.	195	8
IV. Part 2	90	3	XXXVII. Part 1	337	8
V.	102	3	XXXVII. Part 2	283	8
VI.	121	3	XXXVIII.	268	1
VII.	142	3	XXXIX. Part 1	239	4
VIII.	126	3	XXXIX. Part 2	243	3
IX.	133	3	XL.	260	...
X.	143	...	XLI.	408	2
XI.	152	...	XLII.	232	3
XII.	159	...	XLIII.	235	2
XIII.	161	...	XLIV.	217	...
XIV.	365	2	XLV.	246	...
XV.	137	...	XLVI.	228	1
XVI.	163	...	XLVII. Part 1	3	...
XVII.	146	1	XLVII. Part 2	18	...
XVIII.	140	...	XLVII. Part 3	2	...
XIX.	147	...	XLVII. Part 4	10	...
XX.	139	...	XLVII. Part 5	10	...
XXI. Part 1	312	...	XLVII. Part 6	10	...
XXI. Part 2	98	...	XLVII.	209	1
XXI. 1 & 2 (together)	59	...	XLVIII. Part 1	248	3
XXII.	162	...	XLVIII. Part 2	258	2
XXIII.	145	...	XLIX. Part 1	471	2
XXIV.	153	...	XLIX. Part 2	201	4
XXV.	163	...	Index to <i>Memoirs</i> }	644	...
XXVI.	170	...			
XXVII.	421	...			
XXVIII.	380	...			
XXIX.	398	1			

Stock in hand of volumes of the *Monthly Notices* :—

Vol.	At Society's Rooms	At Williams & Norgate's	Vol.	At Society's Rooms	At Williams & Norgate's
I.	63	...	XXVII.	4	...
II.	65	...	XXVIII.	72	...
III.	...	...	XXIX.	52	...
IV.	...	...	XXX.	65	2
V.	...	...	XXXI.	93	...
VI.	50	...	XXXII.	115	5
VII.	2	...	XXXIII.	97	...
VIII.	153	1	XXXIV.	75	1
IX.	24	3	XXXV.	58	...
X.	178	1	XXXVI.	31	1
XI.	184	1	XXXVII.	38	3
XII.	106	2	XXXVIII.	101	2
XIII.	178	3	XXXIX.	97	1
XIV.	177	3	XL.	112	3
XV.	169	2	XLI.	111	5
XVI.	154	2	XLII.	120	1
XVII.	167	1	XLIII.	117	2
XVIII.	245	...	XLIV.	123	3
XIX.	57	...	XLV.	122	2
XX.	30	...	XLVI.	117	2
XXI.	17	...	XLVII.	135	5
XXII.	33	...	XLVIII.	127	3
XXIII.	19	...	XLIX.	121	11
XXIV.	24	...	L.	125	13
XXV.	15	...	LI.	123	17
XXVI.	11	...	Index ...	564	3

LIBRARY CATALOGUE 574

In addition to the above volumes of the *Monthly Notices*, the Society has a considerable stock of separate numbers of nearly all the volumes. With the exception, however, of Vols. XXXVI. to LI. no complete volumes can be formed from the separate numbers in stock.

Instruments belonging to the Society.

- No. 1. The *Harrison* clock.
 „ 2. The *Owen* portable circles, by Jones.
 „ 3. The *Beaufoy* circle.

- No. 4. The *Beaufoy* transit instrument.
 „ 5. The *Herschel* 7-foot telescope.
 „ 6. The *Greig* universal instrument, by Reichenbach and Ertel. The transit telescope, by Utzschneider and Fraunhofer, of Munich.
 „ 7. The *Smeaton* equatoreal.
 „ 8. The *Cavendish* apparatus.
 „ 9. The 7-foot Gregorian telescope (late Mr. Shearman's).
 „ 10. The variation transit instrument (late Mr. Shearman's).
 „ 11. The universal quadrat, by Abraham Sharp.
 „ 12. The *Fuller* theodolite.
 „ 13. The standard scale, by Troughton and Simms.
 „ 14. The *Beaufoy* clock, No. 1.
 „ 15. The *Beaufoy* clock, No. 2.
 „ 16. The *Wollaston* telescope.
 „ 17. The *Lee* circle.
 „ 18. The *Sharpe* reflecting circle.
 „ 19. The *Brisbane* circle.
 „ 20. The *Baker* universal equatoreal.
 „ 21. The *Reade* transit.
 „ 22. The *Matthew* equatoreal, by Cooke.
 „ 23. The *Matthew* transit instrument.
 „ 24. The *South* transit instrument.
 „ 25. A sextant, by Bird (formerly belonging to Captain Cook).
 „ 26. A globe showing the precession of the equinoxes.
 The *Sheepshanks* collection :—
 „ 27. (1) 30-inch transit instrument, by Simms, with level and two iron stands.
 „ 28. (2) 6-inch transit theodolite, with circles divided on silver; reading microscopes, both for altitude and azimuth; cross and siding levels; magnetic needle; plumb-line; portable clamping foot and tripod stand.
 „ 29. (3) Equatorial stand and clock movement for $4\frac{6}{10}$ -inch telescope (telescope lost); double-image micrometer; two wire micrometers; object-glass micrometer.
 „ 30. (4) $3\frac{1}{4}$ -inch achromatic telescope, with equatorial stand; double-image micrometer; one terrestrial and three astronomical eyepieces.
 „ 31. (5) $2\frac{3}{4}$ -inch achromatic telescope, with stand; one terrestrial and three astronomical eyepieces.
 „ 33. (7) 2-foot navy telescope.
 „ 34. (8) Transit instrument of 45 inches focal length, with iron stand and also Ys for fixing to stone piers; two axis levels.
 „ 35. (9) Repeating theodolite, by Ertel, with folding tripod stand.

- No. 36. (10) 8-inch pillar sextant, by Troughton, divided on platinum, with counterpoise stand and artificial horizon.
- „ 37. (11) Portable zenith telescope and stand, $2\frac{3}{4}$ -inch aperture and 26 inches focal length; 10-inch horizontal circle and 8-inch vertical circle, read to $10''$ by two verniers to each circle.
- „ 38. (12) 18-inch Borda repeating circle, by Troughton, $2\frac{1}{8}$ -inch aperture and 24 inches focal length; the circles divided on silver, the horizontal circle being read by four verniers, and the vertical circle by three verniers, each to $10''$.
- „ 39. (13) 8-inch vertical repeating circle, with diagonal telescope, by Troughton and Simms; circle divided on silver, reading to $10''$; a 5-inch circle at eye-end, reading to single minutes; horizontal circle 9 inches diameter in brass, reading to single minutes.
- „ 40. (14) A set of surveying instruments, consisting of a 12-inch theodolite for horizontal angles only, reading to $10''$; two sets of adjusting plates; tripod stand with enclosed telescope; heavy stand for theodolite; Y piece of level; two large and three small ground-glass bubbles divided; level collimator, object-glass $1\frac{5}{8}$ -inch diameter and 16 inches focal length; micrometer eyepiece, comb, and wires; mercury bottle and trough.
- „ 41. (15) Level collimator, with object-glass $1\frac{7}{8}$ -inch diameter and 16 inches focal length; stand, rider-level, and fittings.
- „ 42. (16) 10-inch reflecting circle by Troughton, reading by three verniers to $20''$; counterpoise stand; artificial horizon, with mercury; two tripod stands.
- „ 43. (17) Hassler's reflecting circle, by Troughton, with counterpoise stand.
- „ 44. (18) 6-inch reflecting and repeating circle, by Troughton and Simms, contained in three boxes, two of which form stands. Circle divided on silver, reading to single minutes; two inside arcs divided to single degrees, 150 degrees on each side; artificial horizon and mercury.
- „ 45. (19) 5-inch reflecting and repeating circle, by Lenoir, of Paris.
- „ 46. (20) Reflecting circle, by Jecker, of Paris, 11 inches in diameter, with one vernier reading to $15''$.
- „ 47. (21) Box sextant; reflecting plane and level.
- „ 48. (22) Prismatic compass, by Troughton and Simms.
- „ 49. (23) Mountain barometer.
- „ 50. (24) Prismatic compass, by Thomas Jones, mounted with a cylindrical lens.

- No. 51. (25) Ordinary $4\frac{1}{2}$ -inch compass with needle.
 „ 52. (26) Dipping needle, by Robinson.
 „ 53. (27) Compass needle, mounted for variation.
 „ 54. (28) Magnetic intensity needle, by Meyerstein, of
 Göttingen; a strongly fitted brass box with heavy
 magnet; filar suspension.
 „ 55. (29) Box of magnetic apparatus.
 „ 56. (30) Hassler's reflecting circle, by Troughton; a
 $10\frac{1}{2}$ -inch reflecting and repeating circle, with stand
 and counterpoise, divided on platinum with two
 movable and two fixed indices; four verniers read-
 ing to $10''$.
 „ 57. (31) Box sextant and glass plane artificial horizon,
 by Troughton and Simms.
 „ 58. (32) Plane $2\frac{3}{8}$ -inch speculum, artificial horizon, and
 stand.
 „ 59. (33) $2\frac{1}{2}$ -inch circular level horizon, by Dollond.
 „ 60. (34) Artificial horizon, roof, and trough; the trough
 $8\frac{1}{4}$ by $4\frac{1}{2}$ inches; tripod stand.
 „ 61. (35) Set of drawing instruments, consisting of
 6-inch circular protractor and common protractor,
 T-square; one beam compass.
 „ 62. (36) A pantograph.
 „ 63. (37) A noddy.
 „ 64. (38) A small Galilean telescope with object-glass of
 rock crystal.
 „ 65. (39) Five levels.
 „ 66. (40) 18-inch celestial globe.
 „ 67. (41) Varley stand for telescope.
 „ 69. (43) Telescope, with object-glass of rock crystal.
 „ 71. Portable altazimuth tripod.
 „ 72. Four polarimeters.
 „ 74. Registering spectroscope, with one large prism.
 „ 76. Two five-prism direct-vision spectroscopes.
 „ 78. $9\frac{1}{4}$ -inch silvered-glass reflector and stand, by
 Browning.
 „ 79. Spectroscope.
 „ 80. A small box, containing three square-headed Nicol's
 prisms; two Babinet's compensators; two double-
 image prisms; three Savarts; one positive eyepiece,
 with Nicol's prism; one dark wedge.
 „ 81. A back-staff, or Davis' quadrant.
 „ 82. A nocturnal or star dial.
 „ 83. An early non-achromatic telescope, of about 3 feet
 focal length, in oak tube, by Samuel Scatliffe,
 London.
 „ 84. A Hollis observing chair.
 „ 85. Double-imagemicrometer, by Troughton and Simms.
 „ 86. $4\frac{1}{2}$ -inch Gregorian reflecting telescope, by Short,
 with altazimuth stand and 6-inch altitude and
 azimuth circles and two eyepieces.

- No. 87. $3\frac{1}{4}$ -inch Gregorian reflecting telescope with wooden tripod stand.
- „ 88. Pendulum, with 5-foot brass suspension rod, working on knife-edges, by Thomas Jones.
- „ 89. A Rhabdological Abacus. A contrivance invented by Mr. H. Goodwyn, consisting of a box filled with compartments, in which are square rods covered with numbers, which can be arranged so as to facilitate the labour of multiplying high numbers.
- „ 90. An Arabic celestial globe of bronze, $5\frac{3}{4}$ inches in diameter.
- „ 91. Astronomical time watchcase, by Professor Chevalier.
- „ 92. 2-foot protractor, with two movable arms, and vernier.
- „ 93. Beam compass, in box.
- „ 94. 2-foot navigation scale.
- „ 95. Stand for testing measures of length.
- „ 96. Artificial planet and star, for testing the measurement of a fixed distance at different position-angles.
- „ 97. 12-cell Leclanché battery.
- „ 98. 2-foot 6-inch navy telescope, with object-glass $2\frac{1}{2}$ inches, by Cooke, with portable wooden tripod stand.
- „ 99. 12-inch transit instrument, by Fayrer and Son, with level and portable stand.
- „ 100. 9-inch transit instrument, with level and iron stand.
- „ 101. Small equatorial sight instrument, by G. Adams, London.
- „ 102. Sun-dial, by Troughton.
- „ 103. Sun-dial, by Casella.
- „ 104. Sun-dial.
- „ 105. Box sextant, by Troughton and Simms.
- „ 106. Prismatic compass, by Schmalcalder, London.
- „ 107. Compass, by C. Earle, Melbourne.
- „ 108. Prismatic compass, by Negretti and Zambra.
- „ 109. Dipleidoscope, by E. Dent.
- „ 110. Abney level, by Elliott.
- „ 111. Pocket spectroscope, by Browning.
- „ 112. Universal sun-dial.
- „ 113. Double sextant, by Jones.
- „ 114. Two models, illustrating the effects of circular motions.
- „ 115. A cometarium.
- „ 116. A pair of 18-inch globes.
- „ 117 } Two old sun-dials.
- „ 118 }

- No. 119. Specimens of diffraction gratings, by Prof. W. A. Rogers.
- „ 120. A 6-prism spectroscope, by Browning.
- „ 121. Spitta's improved maximum and minimum thermometer.
- „ 122. A 6-inch speculum, with flat; the speculum said to be by Sir W. Herschel, and re-figured by Sir J. Herschel.
- „ 123. A 6-inch refracting telescope, by Grubb, with 3 eyepieces.
- „ 124. Position micrometer, by Cooke.
- „ 125. A 6-inch refracting telescope, by Simms, with eyepieces and solar diagonal.
- „ 126. $3\frac{1}{2}$ -in. portable refracting telescope, by Tulley, with tripod stand.
- „ 127. Globe representing the visible surface of the Moon, by John Russell, R.A. (1797).
- „ 128. Bichromate battery and Ruhmkorff coil.
- „ 129. Slater's improved armillary sphere, presented by Prof. Slater.

The following instruments are lent, during the pleasure of the Council, to the undermentioned persons:—

- No. 4. The *Beaufoy* transit instrument, to the Observatory, Kingston, Canada.
- „ 10. Variation transit, to Mr. Maxwell Hall.
- „ 16. The *Wollaston* telescope, to Mr. R. Inwards.
- „ 22. The *Matthew* equatoreal, to Mr. J. Brett.
- „ 23. The *Matthew* transit, to Captain W. Noble.
- „ 28. (2) 6-inch theodolite and stand, to Dr. A. A. Common.
- „ 29. Wire micrometer (No. 1), to Mr. C. Thwaites.
- „ „ Wire micrometer (No. 2), to Mr. Maxwell Hall.
- „ 30. (4) $3\frac{1}{4}$ -inch equatoreal and stand, to Mr. E. B. Powell.
- „ „ „ Double-image micrometer, to Mr. Maxwell Hall.
- „ 31. (5) $2\frac{3}{4}$ -inch telescope and stand, to Mr. F. J. Wardale.
- „ 34. (8) Transit instrument and stand, to Professor C. Pritchard.
- „ 38. (12) 18-inch *Borda* repeating circle, to Mr. Maxwell Hall.
- „ 39. (13) 8-inch repeating circle, to Mr. J. Norman Lockyer.
- „ 42. (16) Artificial horizon, roof, and mercury bottle, to Mr. C. Thwaites.
- „ 50. (24) Prismatic compass, to Mr. Maxwell Hall.
- „ 52. (26) Dipping needle, to Mr. Maxwell Hall.
- „ 54. (28) Magnetic intensity needle, to Mr. Maxwell Hall.
- „ 69. (43) Telescope, with rock-crystal object-glass, to Dr. W. Huggins.
- „ 78. $9\frac{1}{4}$ -inch reflector and stand, to Mr. Maxwell Hall.
- „ 79. Spectroscope, to Mr. Maxwell Hall.

- No. 86. 4½-inch Gregorian reflector, by Short (two mirrors only), to Dr. A. A. Common.
- „ 99. 12-inch portable transit instrument, to Mr. H. T. Vivian.
- „ 120. 6-prism spectroscope, by Browning, to Mr. C. Thwaites.
- „ 123. 6-inch refractor, by Grubb, with three eyepieces, to Mr. W. E. Wilson.
- „ 124. Position micrometer, by Cooke, and dark wedge, to the Rev. A. Freeman.

The Gold Medal.

The Council have awarded the Society's Gold Medal to Professor G. H. Darwin for his work on Tides and their influence on the figures and motions of the Heavenly Bodies. The President will lay before the Society the grounds upon which the award has been founded.